

PROCEEDINGS  
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TWO NEW SPECIES OF CIRSOTREMA (EPITONIIDAE) FROM FLORIDA<sup>1</sup>

BY HARALD A. REHDER,

*Associate Curator, Division of Mollusks, United States National Museum.*

In the course of determining an *Epitonium* from Florida, sent to the U. S. National Museum by Prof. T. Van Hyning, it became evident that the American group of species placed under *Cirsotrema* were in need of revision. This paper, therefore, arose out of the critical examination of these West Atlantic forms.

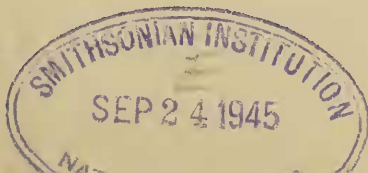
The type species of *Cirsotrema* Mörch 1852<sup>2</sup> by monotypy is *Scalaria varicosa* Lamarck, which Sowerby (Thes. Conch., vol. 1, pt. 4, 1844, p. 103) cites as coming from the Philippines. Species closely related are *C. multiperforata* Sowerby 1874 from Mauritius (also recorded from Singapore by Bavay), *C. bayayi* de Boury 1912 from New Caledonia, *C. plexis* Dall 1925 from Japan, and an undescribed species from the Hawaiian Islands.

Thiele in 1928 (Zeitschrift f. wiss. Zool., vol. 132, 1928, p. 92) erected the section *Cirsotremopsis* for *Scalaria cochlea* Sowerby 1844 from Loanda, West Africa, basing this separation on radular differences. There are other differentiating characters in the shell, among which may be mentioned the greater angularity of the whorls and deeper suture in the West African shell.

A species from Floridian and West Indian waters has long been known under the specific name *cochlea* Sowerby, but it differs from this form in several ways and is receiving a distinct name below. A closely related complex of species belonging to this same subgenus comprises *Cirsotrema pallaryi* De Boury 1912 from Algerian waters, *C. pumicea* Brocchi from the Italian and Algerian Pliocene, as well as several other fossil species found in the Mediterranean basin from the Helvetian (Mid-Miocene) onward, and a living Floridan form described below.

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<sup>2</sup> *Catalogus Conchyliorum* . . . Comes de Yoldi, fasc. 1, p. 49.



We may, therefore, restrict the Subgenus *Cirsotremopsis* Thiele to forms living in the Atlantic, or found fossil from the Middle Miocene to the Pleistocene in the lands bordering the Atlantic waters. Typical *Cirsotrema* occurs apparently only in the Indo-Pacific region.

The species *ranellina* Dall and *octolineata* Conrad, from the Jackson Eocene of Alabama and Mississippi, are probably not typical *Cirsotremas* and neither are the forms from the West Coast of North America listed as such by Durham (*Journal of Paleontology*, vol. 11, 1937, pp. 491-493). The species from the older Tertiary formations of Europe placed under *Cirsotrema* by Cossmann (*Essais de Paleconch. comp.*, vol. 9, pp. 51-52) likewise must be separated from the true *Cirsotremas*.

***Cirsotrema (Cirsotremopsis) dalli*, new species.**

Shell, rather large, slender, turriculate, white. Nuclear whorls decolated, remaining whorls 7.5, sculptured with crowded, slightly sigmoid, axial ribs which are about as broad as the interspaces and composed of compressed, rather wavy, lamellae. In the interspaces obscure broad spiral cords are visible, which are also noticeable on the aboral side of the varices, of which there are two to three on each whorl. The axial ribs have an increasing tendency to form an angle at the upper portion of the whorl, which gives the later whorls an angular appearance below the suture. The axial ribs are fused together at the prominent basal cord, but resumed, though narrower, in the narrow channel that separates the basal cord from the columellar cord. The suture is deep, and the aperture is subcircular, surrounded by a stout varicial lip.

The type, U.S.N.M. No. 515240, measures: Height, 41 mm.; breadth, 14.1 mm. It was dredged by the Bureau of Fisheries at Sta. 2373 in the Gulf of Mexico, off Cape San Blas, Florida, in 25 fathoms on coral bottom. U.S.N.M. No. 93710 contains another specimen from the same station.

A third specimen is in the collection of Dr. T. Van Hyning and was collected by Mr. J. C. Russell on Bush Key, Dry Tortugas, Florida. It measures: Height, 42.7 mm.; breadth, 16.5 mm.

This species is closely related to *Cirsotrema (Cirsotremopsis) cochlea* Sowerby from Loanda, West Africa, which, however, is a more loosely coiled shell, with a deeper suture, and a resultant subdisjunct aperture. The shell which Dunker described and figured from Loanda, West Africa (*Index Moll. Guineam coll. Tams*, 1853, p. 18, pl. 2, figs. 46-48) is apparently a different species.

***Cirsotrema (Cirsotremopsis) arcella*, new species.**

Shell of medium size, turritid, moderately solid, chalky white. Nuclear tip broken off, remaining nuclear whorl smooth; postnuclear whorls  $7\frac{1}{4}$  to  $7\frac{1}{2}$ , sculptured with spiral cords crossed by separated axial riblets which in subsequent whorls become broader, being composed of many compressed wavy lamellae. The ribs finally fuse together, leaving only axial rows of small suboval openings. In the third whorl, the riblets begin to become shouldered which soon becomes very prominent, giving

the last four whorls a strongly shouldered appearance, the shoulder planate, with the edge tufted or subdenticulate, later on nodose. The whorls show two or three varices on each whorl, and a broad basal cord with a narrower cord in the umbilical region along the inner edge of the aperture. Mouth suborbicular, outer lip with a varix.

The type, U.S.N.M. No. 83725, measures: Height, 16.4 mm.; breadth, 7.2 mm., and was collected by the Bureau of Fisheries at Station 2602 in 124 fathoms, 36 miles southwest of Cape Hatteras, North Carolina. Other lots in the collection of the U.S. National Museum are from 20 to 30 fathoms off Miami, Florida, and Key West, Florida.

This species differs from *Cirsotrema* (*Cirsotremopsis*) *dalli* in being smaller, and in having the shoulder more strongly angulate, and flattened horizontally above, giving the spire a sharply terraced outline; the sculpture is more obviously reticulate. It is similar to *Cirsotrema pallaryi* De Boury (Journ. de Conch., vol. 60, p. 172, pl. 8, fig. 3, 1912) from Algeria.